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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,957	05/30/2001	Tomoki Kobayashi	IIW-003	9126

959 7590 05/02/2003

LAHIVE & COCKFIELD
28 STATE STREET
BOSTON, MA 02109

EXAMINER

SCALTRITO, DONALD V

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 05/02/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/870,957

Applicant(s)

KOBAYASHI ET AL.

Examiner

Donald V Scaltrito

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☒ Claim(s) 1-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 1-19 are objected to because of the following informalities: The claims are replete with grammatical errors and improper English. Appropriate correction is required.

Claims 2, 6-10, 12 & 15-18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The Examiner would like to point out that the objections to claims 8-10, 12 & 15-18 are rooted in the fact that these dependent claims read as method claims whereas the independent base claims, claims 1 & 13, read as apparatus claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 & 6-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With respect to Claims 2 & 6-19, the metes and bounds of the claims are indefinite because the claim language states an "apparatus" but the claim language reads as a method. The Examiner is confused as to whether the applicant's intend to claim an apparatus or a

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method. With respect to Claim 14, it is not understood by the Examiner as to how a heat exchanger can be disposed between the gas before being heated by the compressor and the gas after being heated by the compressor. This ambiguity renders Claim 14 vague and indefinite. Since Claim 16 is dependent upon Claim 14, it is also rendered vague and indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 11-13 & 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Strasser (U.S. Patent No. 5,543,238).

Strasser discloses anode and cathode side recirculation means for recirculating exhaust gases from a fuel cell stack. With respect to Claim 1, Strasser discloses a means for returning exhaust gas discharged from the fuel cell stack to the fuel gas supply lines (see Figure 1 of this reference; see also column 5, lines 14-30). Strasser also discloses that the amount of exhaust gas returned to the fuel gas supply is dependent upon operational parameters of the fuel cell, specifically the power output of the fuel cell (column 6, lines 22-38). The Examiner would like to point out that the preamble to Claim 1 is interpreted as an intended use statement. With respect to Claims 3 & 4, Strasser discloses a compressor disposed in the anode and cathode exhaust gas lines that aids in discharging the exhaust gases and returning them to the supply gas lines (Figure

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1). With respect to Claim 5, Strasser discloses an adjusting element disposed in the exhaust gas line that serves to regulate and control the pressure of the exhaust gas (column 5, lines 31-48; column 5, line 62 – column 6, line 5). With respect to Claims 11 & 12, Strasser discloses governing the amount of exhaust gas that is returned to the fuel gas supply line that is proportional to the amount of oxygen needed by the fuel cell stack (column 5, lines 31-38). With respect to Claim 13, Strasser discloses a means for returning exhaust gas discharged from the fuel cell stack to the fuel gas supply lines wherein a compressor is disposed in the anode and cathode exhaust gas lines that aids in discharging the exhaust gases and returning them to the supply gas lines (see Figure 1 of this reference; see also column 5, lines 14-30). The Examiner would like to point out that, although not specifically disclosed by Strasser, all gases under compression will increase in temperature as a result. With respect to Claim 19, Strasser discloses governing the amount of exhaust gas that is returned to the fuel gas supply line that is proportional to the amount of oxygen needed by the fuel cell stack (column 5, lines 31-38).

This reference, therefore, anticipates Claims 1, 3, 5, 11-13 & 19 of the current application.

Conclusion

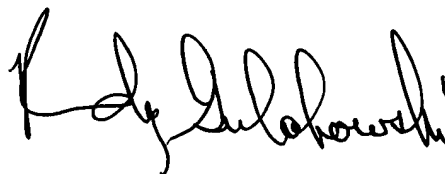
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Scaltrito, whose telephone number is 703.305.4926. The examiner can be reached in his office on Monday-Friday between the hours of 9am to 6pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, may be reached at 703.308.4333. The official fax number for the organization where this application or proceeding is assigned is 703.305.3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661

Donald Scaltrito
Patent Examiner
Art Unit 1746
April 28, 2003

A handwritten signature in black ink, appearing to read "Randy Gulakowski". The signature is fluid and cursive, with the first name "Randy" and last name "Gulakowski" clearly distinguishable.

RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700